

Data Visualisation

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Datasets

The first dataset I used was the listing of American House prices in the top 50 American cities. <https://www.kaggle.com/datasets/jeremylarcher/american-house-prices-and-demographics-of-top-cities>. It contained information that can be used to determine why some areas are more expensive than others and what people live in which locations.

Additionally, I got temperature data for the major American cities to see if the climate in certain cities and states affected the cost of living / house prices.

<https://www.kaggle.com/code/ahmedsalouh/analyze-weather-data>. I had to do significant modifications to this data to get it merged with the original dataset, it recorded the temperature for each city every day. This wasn't useful to me, so I found the average temperature for each season and used that to determine the seasonal weather. Furthermore, I dropped the cities in the original dataset which didn't have the weather data recorded, this dataset this had the main American cities / states recorded.

Lastly, I found the economic data for each of the states in the original dataset, it recorded the cost of living, such as the cost of transport and groceries for each location to see which state is the most expensive. This was also merged with the original dataset to enhance the overall information within the dataset.

<https://www.kaggle.com/datasets/lukkardata/cost-of-living-missouri-economic-research/data>.

Exploration

The initial exploration indicates the living space, number of baths and median income of the household all have the highest correlation to the price of the property. Additionally, the temperature in winter, number of beds and cost of grocery also have correlate to the price of the property.

Given this initial finding, I explored these relationships further using the individual states to see what has the greatest impact on the price of the property.

Additionally, I explored the impact that the weather in winter can have on the price of property. Due to the possible extreme winter conditions in some states, I feel that would be a factor that would put people off buying a property in that state, which is supported by the correlation matrix.

Furthermore, I looked at the household income by state to see what the breakdown of the average earning potential was in each state in the dataset.

Once the variables were visualised to see how they could affect the price of property and how different factors could influence the decision for a purpose to move to a state, I then defined the big idea.

Big Idea

Navigating Real Estate for First-Time Buyers and people emigrating to the USA: What should really be considered when buying a property in a new location?

This Big Idea is about equipping first-time home buyers and people who may be emigrating to the USA with the knowledge to make the correct decisions for them in the real estate market.

The idea is to present them with the necessary information about the property prices and factors that affect the price such as average household income and quality of life factors such as climate and cost of living. To choose the ideal location in America to relocate or buy their first home.

Dashboard

The dashboard shows the various factors which can aid a person decision on where to move to in the USA and points out some of the most important considerations when moving locations. It also is ideal for first time buyers who are unsure of where they fit in comparison to other people on the property ladder. This dashboard allows them to make informed decisions based on their preferences, buy within their means, and helps them to get the most out of what they have.

The weather chart enables the person to identify which locations they would completely rule out, such as Minneapolis due to its extreme winters or Phoenix because of its extreme summers. They may be looking for somewhere like Miami and Los Angeles where its relatively warm year-round and this visualisation will guide this decision-making process.

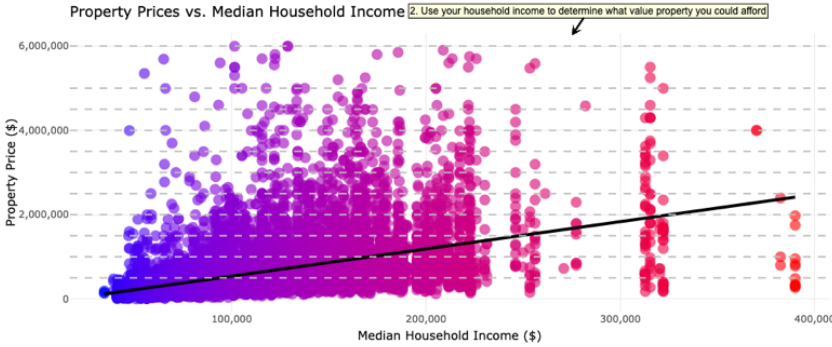
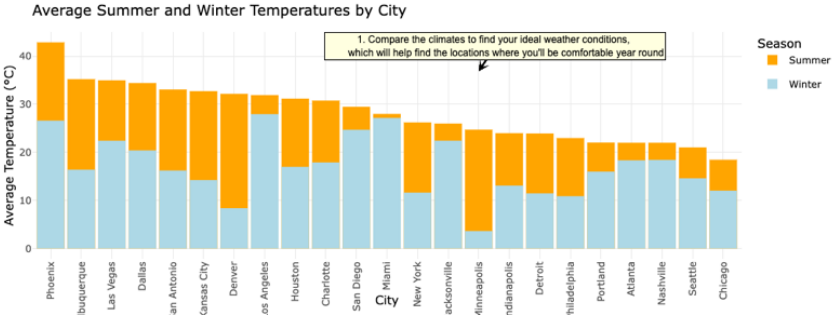
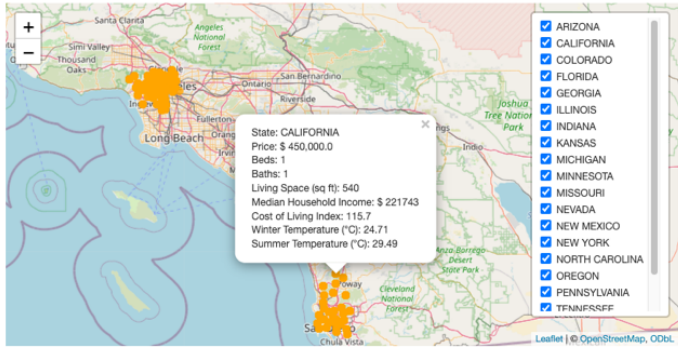
The ****Property/Income scatter plot**** enables the person to see roughly what value property they will be aiming for using their household income. The trendline makes it easy to trace what value of property they will be looking to obtain.

Using the discovery from the previous graph, the person can then see roughly what city they would be aiming to buy in, when considering the climate as well as the average property price in that location they should be able to narrow down the options.

Lastly, once the person has decided on a few locations, they can browse the ****map**** and see what is on offer in the various locations, the map will provide various information about the property which could contribute to their overall decision.

Real Estate for First-Time Buyers and people emigrating to the USA

Key factors people will have to consider when buying a home.



Conclusion

In conclusion, the dashboard illustrates the vital considerations people must make when buying their first home and decided where they would like to live and seeing where they fit on the property ladder. It also highlights the considerations that people emigrating to the USA must make, who are looking to settle down can buy a home. If you want lots of living space, then New York wouldn't be the location for you, if you don't like constant heat, then you will have to find somewhere with a more seasonal climate. These are all questions that must be asked and are answered ion the dashboard.